L22 ANSWER 1 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1

ACCESSION NUMBER: 1996:188511 BIOSIS
DOCUMENT NUMBER: PREV199698744640
TITLE: Expression of Ep-CAM in **cervical** squamous epithelia correlates with an increased proliferation and the disappearance of markers for terminal differentiation.
AUTHOR(S): Litvinov, Sergey V. (1); Van Driel, Willemien; Van Rhijn, Connie M.; Bakker, Hellen A. M.; Van Krieken, Han; Fleuren, Gert J.; Warnaar, Sven O.
CORPORATE SOURCE: (1) Dep. Pathology, Leiden Univ., Building 1, L1-Q, P.O. Box 9600, 2300 RC Leiden Netherlands
SOURCE: American Journal of Pathology, (1996) Vol. 148, No. 3, pp. 865-875.
ISSN: 0002-9440.
DOCUMENT TYPE: Article
LANGUAGE: English

AB Ep-CAM, an epithelial adhesion molecule, is absent in normal **squamous** epithelia but can be detected in some **squamous** carcinomas. Using a panel of monoclonal **antibodies** to keratinocyte differentiation and proliferation markers, we investigated the association of Ep-CAM expression with differentiation-related and/or neoplastic changes in **cervical** epithelium. Normal endocervical glandular epithelium (both **columnar** and reserve cells) appeared strongly positive for Ep-CAM, whereas ectocervical **squamous** epithelial cells did not express this molecule. Expression of Ep-CAM (in basal cells) was sometimes observed in morphologically normal ectocervical tissue but only in areas bordering **cervical** intraepithelial neoplasia (CIN) lesions. At the early stages of neoplasia the expression of Ep-CIM was regularly present in **squamous** epithelium, in general consistent with the areas of atypical, undifferentiated cells. Thus, in CIN grades I and II, the basal/suprabasal layers of the epithelia were positive, whereas in CIN grade III lesions, up to 100% of the cells, over the whole thickness of the epithelium sometimes excluding the very upper layers, expressed Ep-CAM. A clear increase, not only in number of positive cells but also in levels of Ep-CAM expression (intensity) was observed during progression from CIN I to CIN III. Expression of Ep-CAM in ectocervical lesions did not coincide with a reappearance of the simple epithelium cytokeratins (CK8 and CK18). On the other band, expression of Ep-CAM in atypical cells of CIN lesions correlated with the disappearance of CK13, which normally marks cells undergoing **squamous** differentiation. As was shown with Ki-67, a marker for proliferating cell populations, the areas of Ep-CAM expression were also the areas of enhanced proliferation. Cells expressing Ep-CAM did not express involucrin, a marker for cells committed to terminal differentiation. In the majority of both **squamous** and adenocarcinomas of the **cervix** a strong expression of Ep-CAM was observed, although some decrease in the expression (both the intensity and the number of positive cells), as compared with CIN III lesions, was observed in the areas of **squamous** differentiation. This study demonstrates that the expression of Ep-CAM in **cervical squamous** epithelium is associated with abnormal proliferation of cell populations that are not

Contributions of immunocytochemistry to gynaecological pathology.

Kurman RJ.

Clin Obstet Gynaecol. 1984 Apr;11(1):5-23.

The immunoperoxidase technique is relatively simple and inexpensive, and once established it can be easily adapted to any number of antigens. The method has already been employed to localize a wide variety of enzymes, proteins, polypeptide hormones, steroid hormones, immunoglobulins, and viral and protozoal antigens. The only limitations of the immunoperoxidase technique are the availability of specific antisera and the ability of the cellular product being tested to retain its antigenicity through the process of fixation, dehydration and embedding. It is now apparent that, with the exception of a few labile antigens, most cellular products survive routine fixation to the extent that sufficient antigenic determinants remain to permit their recognition. Meaningful interpretation of the results, however, depends on thoughtful evaluation of the methodology. This requires careful immunological and tissue controls. Standardization of antibodies used as reagents, particularly in the rapidly burgeoning field of monoclonal antibodies, is essential in order that studies performed by different laboratories can be compared. The application of immunocytochemistry to the study of gynaecological disease has been relatively recent, but it is apparent that this technique is a powerful tool with which to confirm and extend the morphological observations made over the last century. By taking advantage of the high degree of specificity of antibodies, immunocytochemistry has assumed a prominent role as a highly specific 'special stain'. Of perhaps even greater significance is the use of this technique to explore and characterize the biochemical features of cells within the framework of conventional morphology. Thus, gynaecological pathology is on the threshold of a new era in which the pathologist can now study the cellular manifestations of disease on both a functional and a morphological basis.

mmunohistochemical approaches to diagnosis in gynecologic pathology.

Beckstead JH.

Clin Lab Med. 1995 Sep;15(3):727-42.

Department of Pathology, Oregon Health Sciences University, Portland, USA.

Immunohistochemical techniques have become widely used in gynecologic pathology in recent years. This article is divided into sections of major anatomic areas of gynecologic interest, and each section discusses specific pathologic questions approachable by these studies. A description of reagents, as they apply in each case, is also included.

Publication Types:
Review
Review, Tutorial

MeSH Terms:
Biopsy
Cervix Neoplasms/diagnosis
Fallopian Tubes/pathology
Female
Genital Neoplasms, Female/*diagnosis
Human
Immunohistochemistry/*methods
Male
Ovarian Neoplasms/diagnosis
Pregnancy
Trophoblastic Neoplasms/diagnosis
Uterine Neoplasms/diagnosis
Vimentin/analysis
Vulvar Neoplasms/diagnosis

Substances:
0 (Vimentin)

TERMINOLOGY FOR EPITHELIAL ABNORMALITIES OF THE UTERINE CERVIX.

FRIEDELL GH.

Am J Clin Pathol. 1965 Sep;44:280-2.

Keywords:
*CERVIX NEOPLASMS
*CERVIX UTERI
*CLASSIFICATION
*EPITHELIUM
*GYNECOLOGIC DISEASES
*HISTOLOGY
*NOMENCLATURE
*PATHOLOGY

ooks / Serials / AVs :
Item 9 displayed (out of 16 found).
For this item only:

Origin of premalignant lesions of cervix uteri / M. Coppleson, B. Reid.
Coppleson, M.
Reid, B.
In: Taymor, M.L. and Green, T.H., Jr. Progress in Gynecology, Vol. 6. New York, Grune and Stratton, 1975.
Publisher: 1975.
Description: p. 517-539.

MeSH Terms:
- Cervix Neoplasms
- Colposcopy
- Diagnosis
- Age Factors
- Coitus
- Disease
- Endoscopy
- Histology
- Laboratory Techniques and Procedures
- Neoplasms
- Physical Examination
- Sex Behavior

Keywords:
- Cervical Cancer
- Examinations And Diagnoses
- Cancer
- Diseases
- Laboratory Procedures
- Physical Examinations And Diagnoses

Notes: Includes bibliographical references. (37 ref.)
The existing literature concerning cervical cancer has been searched and a summary is presented of current knowledge of the pathology, epidemiology, and possible etiological agents of the disease. It is hypothesized that metaplasia is the key process in the development of squamous cancer of the cervix. This process transforms columnar

epithelium to normal squamous epithelium, a fact distinguishable through colposcopy. Occasionally, as a result of some factor introduced through coitus, the resultant squamous epithelium is atypical. Such atypical metaplasia will develop into cervical cancer. Formation of this hypothesis regarding the biology of the transformation some developed from a combination of colposcopic, histological, and experimental studies. The main biological agent introduced during coitus and believed to be instrumental in the development of cervical lesions is the herpes simplex virus. Colpophotographs of developing cervical cancer are presented. Emphasized use of colposcopy and a multidisciplinary approach could result in recognition of critical stages earlier in the process of in cervical cancer development.
Report Number: PIP 755480
UI: 100986368

Reserve cell hyperplasia, squamous metaplasia and epidermization / E. Von Haam, J.W. Old.

Von Haam, E.
Old, J. W.

In: Gray, L.A. ed. Dysplasia, carcinoma in situ and micro-invasive carcinoma of the cervix uteri. Springfield, Illinois, Charles C. Thomas, 1964.
Publisher: 1964.
Description: p. 41-82.

MeSH Terms:

- Age Factors
- Cervix Neoplasms
- Cervix Uteri
- Estrogens
- Histology
- Neoplasms
- Research
- Uterus
- Women
- Biology
- Demography
- Disease
- Endocrine System
- Genitalia
- Genitalia, Female
- Hormones
- Laboratory Techniques and Procedures
- Physiology
- Population
- Population Characteristics
- Pregnancy
- Urogenital System

Keywords:

- Cancer
- Cervical Cancer
- Cervix
- Clinical Research
- Demographic Factors
- Diseases
- Laboratory Procedures
- Research Methodology
- Uterine Effects

Notes: Includes bibliographical references. (78 ref.)

Reserve cell hyperplasia, squamous metaplasia, and epidermization are discussed. 1000 consecutive cervical specimens were examined to evaluate the importance of reserve cell hyperplasia and squamous metaplasia of the cervix as to their incidence and relationships to other diseases of the cervix including cervical cancer. Included were 108 borderline lesions, carcinomas in situ and invasive carcinomas. The data agree

essentially with those appearing in the literature indicating that reserve cell hyperplasia is frequently present in the human cervix and represents a common lesion associated with various inflammatory processes of the cervix, cervical polyps, and uterine fibroids. The theory that reserve cell hyperplasia is a result of a proliferations of multipotential intermitotic cells, which under normal conditions serve as the germinative or basal cells of the normal columnar epithelium of the endocervical surface and the endocervical glands, is favored. Under continuous environmental stimuli, reserve cell hyperplasia has a tendency to transform into squamous metaplasia, which perhaps represents an end stage of epithelial differentiation and is incapable of reverting to columnar epithelium. It has been established that reserve cell disorders are present with much greater frequency in cervices which show established in situ carcinoma. It is believed that the majority of reserve cell disorders are the result of benign stimuli alone and that only a small number are the result of neoplastic stimulation.
Report Number: PIP 640400